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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/804,921	03/19/2004	Ross Thomas Kaufman	KCC 4995 (K-C 20,357A)	8211
321	7590	09/28/2006	EXAMINER	
SENNIGER POWERS ONE METROPOLITAN SQUARE 16TH FLOOR ST LOUIS, MO 63102			HAND, MELANIE JO	
			ART UNIT	PAPER NUMBER
			3761	

DATE MAILED: 09/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/804,921

Applicant(s)

KAUFMAN ET AL.

Examiner

Melanie J. Hand

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-57 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-57 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/12/06</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments filed July 13, 2006 have been fully considered but they are not persuasive.

With respect to applicant's arguments regarding the prior art of Hale, Examiner is unsure why applicant argues that Hale does not teach the claimed amounts of aliphatic DCA, aromatic DCA and dihydric alcohol. Examiner refers applicant to Page 3 and the last sentence of the first paragraph, wherein Examiner clearly states the teachings of Hale regarding these claimed amounts. Examiner acknowledged the deficiency of Hale regarding a teaching of number and weight average molecular weights and glass transition temperature by incorporating secondary and tertiary references Chung (who teaches the molecular weights) and Strand (who teaches the glass transition temperature). Examiner is also unsure of applicant's reason for traversal on these grounds, as both Strand and Chung teach copolyester films that comprise an aliphatic DCA, an aromatic DCA and a dihydric alcohol. Since the range of weight percents for each component as taught by Chung and Strand for their respective films each fall within the ranges set forth in the claims, the number and weight average molecular weights taught by Chung and the glass transition temperature taught by Strand are relevant in that they must necessarily be inherent properties of the claimed film and the prior art films of Chung and Strand and therefore render claims 1-57 unpatentable. Examiner reminds applicant that applicant has set forth ranges, not exact compositions or exact values, for the properties referred to (e.g. average molecular weight, glass transition temperature). This response also addresses applicant's argument that the Office's argument of inherency is based upon mere assumption. The films of Hale and Chung and Strand comprise other elements, as applicant correctly notes. However the

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claims use open-ended "comprised of" language as well. Examiner bases an argument of inherency on the elements of the film clearly set forth in the claimed invention and property values clearly set forth in the claimed invention. Chung and Strand clearly set forth copolyester films having compositions that satisfy the limitations of the claimed invention and therefore, since it is well-known that chemical composition of a film or solution dictates substantially all of its properties and behaviors, the property values set forth in the claimed invention are inherent in the composition claimed and thus are features of the claimed invention rendered unpatentable over the prior art of the combined teaching of Hale and Chung and Strand. With respect to applicant's argument that Examiner's argument that the number average molecular weight is an inherent property is incorrect, Examiner has restated the rejection of claim 1 to incorporate the mol% for the aliphatic and aromatic DCAs and the dihydric alcohol and given further reasoning for maintaining the inherency argument. With respect to applicant's argument regarding Chung's teaching of an aromatic-aliphatic pre-polymer and that its mol% of aromatic and aliphatic DCA do not render the claims unpatentable, Examiner has calculated mol% for the aromatic and aliphatic DCAs and the dihydric alcohol based not upon specific examples given by Chung, but on the weight percents given in the Abstract, the range of number average molecular weight values for the entire resin composition and the range given for aromatic DCA to aliphatic DCA mole ratio in the prepolymer. The results of the calculations are stated in claim 1.

With respect to applicant's argument that Hale does not teach that the mol % of aromatic DCA is above 35% or that the aliphatic DCA is 1,4-cyclohexane DCA, it is noted that the features upon which applicant relies (i.e., more than 35 mol % aromatic DCA and that the aliphatic DCA is cyclohexane DCA) are not recited in the rejected claim(s). Although the claims

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are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

With respect to applicant's argument that neither Hale nor Chung nor Strand teaches the desirability of an aliphatic-aromatic.copolyester film, Hale does not need to teach motivation as it is the primary reference, Chung teaches a film that is substantially identical to that of Hale, therefore the motivation to combine the two films is self-evident in that the properties Chung teaches will also be properties taken on by the combined teaching of Hale and Chung with a reasonable expectation of success. The same reasoning applies to combining the prior art of Strand with the combined teaching of Hale and Chung, i.e. that because the prior art films are comprised of substantially identical materials with substantially identical ranges of composition, the motivation to combine with a reasonable expectation of success is self-evident.

#### ***Information Disclosure Statement***

The information disclosure statement (IDS) submitted on September 12, 2006 was filed after the mailing date of the Application on March 19, 2004. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

#### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hale et al (U.S. Patent Application Publication No. 2003/0039851) in view of Chung et al (EP 1,106,640 A2), and further in view of Strand et al (U.S. Patent Application Publication No. 2004/0127609).

With respect to **Claims 1,7,8,11,12,14,15,19,20,53,54**: Hale teaches a multilayer film for use in an absorbent article comprising a stretched multilayer film comprising a thermoplastic layer bonded to a layer comprised of calcium carbonate filler particles and a biodegradable copolyester. The copolyester film is further comprised of 25-70 mol% terephthalic acid (aromatic dicarboxylic acid, hereafter "aromatic DCA"), 30-75 mol% adipic acid (aliphatic dicarboxylic acid, hereafter "aliphatic DCA") and 100 mol% butanediol (hereafter "dihydric OH"), the mol% based on 100 mol% diacid and 100 mol% diol component. Therefore, the actual total mol% based on the mixed composition are: 12-35 mol% terephthalic acid, 15-37% adipic acid and 45-50% butanediol.

Hale does not teach any particular component of a diaper that the film is used for, however since it is a stretchable copolyester film that is biodegradable, it would be obvious to one of ordinary skill in the art that its best intended use is as an outer cover or backsheet material. Hale also does not teach a weight average molecular weight (hereafter, "Mw") or number average molecular weight (hereafter, "Mn") for the copolyester film. Chung teaches a substantially identical copolyester film with a breakdown of 0.00019-6 mol% aromatic DCA (based upon an aromatic:aliphatic mole ratio of .8:2 in the prepolymer), 8-100% aliphatic DCA and 10-100% dihydric alcohol having an Mw value of 100,000-600,000 amu, or Daltons, and an Mn value of 30,000-70,000, wherein the mol % calculated herein are based upon the number average molecular weight. ('640, ¶¶ 0014-0016) Since Chung teaches a substantially identical film (i.e. the mol% ranges for the aliphatic DCA and the dihydric alcohol satisfy the limitations

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set forth and the upper end of the mol% range for the aromatic DCA is considered to be "about 10%", thus satisfying the limitations set forth), Examiner asserts that these molecular weights, Mw and Mn, are inherent properties of the film taught by Hale.

Neither Hale nor Chung teaches a glass transition temperature for such a copolyester film. Strand teaches a flame retardant copolyester comprising 0-20 mol% diacid, that diacid being a mixture of an aromatic DCA and adipic acid, and 10-100 mol% 1,4-butanediol. Strand teaches that the glass transition temperature Tg of the copolyester film is between -45 and 40 degrees C. ('609, ¶¶ 0027-0029) Since Strand teaches a film substantially identical to the film taught by Hale and Chung, Examiner asserts that the glass transition temperature range taught by Strand is an inherent property of the film taught by Hale.

With respect to **Claims 2-6,55-57**: Hale teaches that the calcium carbonate particles are present in an amount between 20-80 wt% of the film. ('851, ¶0080) Calcium carbonate particles are by nature nonporous.

With respect to **Claims 9,10**: Terephthalic acid is a substituted aromatic DCA.

With respect to **Claim 13**: 1,4-butanediol is a straight chain dihydric alcohol.

With respect to **Claims 16-18**: Hale teaches trimellitic acid as the branching agent. ('851, ¶0057), which has three or more carboxylic acid functions.

With respect to **Claims 21,22**: Hale teaches that the film is fabricated at a thickness of between 75-125 microns. ('851, ¶0089)

With respect to **Claims 23,24**: Hale teaches a laminate of the copolyester film and a second layer comprised of a thermoplastic nonwoven polyolefin film. ('851, ¶0077) With respect to Claim 24, Hale does not explicitly teach a spunbond nonwoven, however substituting a spunbond would yield an identical product to that explicitly taught by Hale. Claim 24 thus is unpatentable over the prior art of Hale and Chung and Strand as it contains product-by-process language. See *In re Marosi*, 710 F.2d 799, 218 USPQ 289 (Fed. Cir. 1983) and *In re Thorpe*, 777 F.2d 695, 227 USPQ 964 (Fed. Cir. 1985). See also MPEP § 2113.

With respect to **Claim 25**: Hale does not teach a basis weight for the film, however Examiner asserts that a basis weight of 30 gsm is an inherent property of both the film taught by Hale and the claimed invention, as Hale teaches a substantially identical film to that of the claimed invention.

With respect to **Claims 26-28**: Hale teaches bonding the copolyester laminate to a substrate (e.g. the thermoplastic layer) using thermal bonding or adhesives. ('851, ¶0084) With respect to Claim 28, Hale does not teach ultrasonic bonding however it is an alternative method for bonding the layers. In the instant case substitution of equivalent methods requires no express motivation, as long as the prior art recognizes equivalency, *In re Fount* 213 USPQ 532 (CCPA 1982); *In re Siebentritt* 152 USPQ 618 (CCPA 1967); *Graver Tank & Mfg. Co. Inc. v. Linde Air Products Co.* 85 USPQ 328 (USSC 1950).



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With respect to **Claims 29-31**: Hale teaches any technique known in the art for producing the multilaminate of the claimed invention, which includes both bonding and carding and blown film processes, as well as a process for forming spunbond lace nonwovens. ('851, ¶0084)

With respect to **Claim 32**: Hale does not teach a polylactic acid based substrate for the second layer/substrate, however it is an equivalent material to a thermoplastic nonwoven and thus can be substituted with a reasonable expectation of success. In the instant case substitution of equivalent methods requires no express motivation, as long as the prior art recognizes equivalency, *In re Fount* 213 USPQ 532 (CCPA 1982); *In re Siebentritt* 152 USPQ 618 (CCPA 1967); *Graver Tank & Mfg. Co. Inc. v. Linde Air Products Co.* 85 USPQ 328 (USSC 1950).

With respect to **Claims 33-36**: Hale does not teach a hydrostatic pressure resistance of at least 60 millibar, at least 80 millibar, at least 120 millibar or at least 180 millibar for the copolyester film. Examiner asserts that hydrostatic pressure is an inherent property of the film of the claimed invention and thus claims 33-36 are unpatentable over Hale as Hale teaches a substantially identical film and thus would possess these hydrostatic pressure resistance values.

With respect to **Claims 37-40**: hale teaches that the copolyester film has an MVTR rate of between 500-10,000 g-mL/m<sup>2</sup>-day. ('851, ¶0036) With respect to claims 39 and 40, hale does not teach an MVTR that is at least 10,000 g-mL/m<sup>2</sup>-day or at least 25,000 g-mL/m<sup>2</sup>-day, however applicant has not assigned any criticality to these values. Therefore Examiner asserts that these values are mere optimizations of the MVTR rate property and thus unpatentable over the prior art of Hale and Chung and Strand. It has been held that where general conditions of

claim are disclosed in prior art, it is not inventive to discover optimum or workable ranges by routine experimentation. See *In re Aller, Lacey and Hall* (105 USPQ 233, CCPA, 1955).

With respect to **Claims 41-43**: Hale does not teach a modulus of elasticity of between 50-250 MPa for the copolyester film. Examiner asserts that this range of values for modulus of elasticity is an inherent property of the film of the claimed invention and thus claims 41-43 are unpatentable over Hale as Hale teaches a substantially identical film and thus would possess a modulus of elasticity within the ranges set forth in all of claims 41-44.

With respect to **Claims 44-49**: Hale does not teach an elongation to break for the copolyester film. However, Chung teaches an elongation to break of 200-800% for samples of a substantially identical film. Examiner asserts therefore that an elongation to break of 200-800% is an inherent property of the copolyester film of the claimed invention and claims 44-49 are unpatentable over the prior art of Hale and Chung.

With respect to **Claims 50-52**: Hale does not teach a break stress of from about 15 Mpa to about 50 Mpa. Chung teaches a tensile strength of between 335-420 kg/cm<sup>2</sup>, or 33-42 Mpa. Since Chung teaches a substantially identical film to that of Hale, Examiner asserts that the value is an inherent property of both the film taught by Hale and the film of the claimed invention and thus claims 50-52 are unpatentable over the prior art of Hale and Chung.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie J. Hand whose telephone number is 571-272-6464. The examiner can normally be reached on Mon-Thurs 8:00-5:30, alternate Fridays 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tatyana Zalukaeva can be reached on 571-272-1115. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Melanie J Hand  
Examiner  
Art Unit 3761

MJH  
September 14, 2006

TATYANA ZAIKAEVA  
SUPERVISORY PRIMARY EXAMINER

